

12MC500

LOW FREQUENCY TRANSDUCER Preliminary Data Sheet

KEY FEATURES

- High power handling: 1.000 W program power
- 2,5" copper wire voice coil
- Malt Cross[©] Cooling System
- Low power compression looses
- High sensitiviy: 97,8 dB
- High efficiency
- FEA optimized magnetic circuit
- Designed with MMSS technology for high control, linearity and low harmonic distortion
- Waterproof cone with treatment for both sides of the cone
- Extended controlled displacement (X_{max}): 8 mm
- Massive mechanical displacement capability: X_{damage} ± 40 mm
- Weight 5,8 kg
- Optimized for 2 or 3 way PA systems and line array applications

TECHNICAL SPECIFICATIONS

Nominal diameter Rated impedance	300 mm 12 in 8 Ω
Minimum impedance	5,8 Ω
Power capacity*	500 W _{AES}
Program power	1.000 W
Sensitivity	97,8 dB @ 1W @ Z _N
Frequency range	50 - 5.500 Hz
Recom. enclosure vol.	30 / 100 l 1,06 / 3,53 ft ³
Voice coil diameter	63,5 mm 2,5 in
BI factor	17,23 N/A
Moving mass	0,059 kg
Voice coil length	19,5 mm
Air gap height	10 mm
X _{damage} (peak to peak)	40 mm



THIELE-SMALL PARAMETERS**

Resonant frequency, f _s	57 Hz
D.C. Voice coil resistance, R _e	5,5 Ω
Mechanical Quality Factor, Q _{ms}	8,58
Electrical Quality Factor, Q _{es}	0,39
Total Quality Factor, Q _{ts}	0,38
Equivalent Air Volume to C _{ms} , V _{as}	54,9 I
Mechanical Compliance, C _{ms}	128 μm / N
Mechanical Resistance, R _{ms}	2,50 kg / s
Efficiency, η ₀	2,53 %
Effective Surface Area, S _d	0,055 m ²
Maximum Displacement, X _{max} ***	8 mm
Voice Coil Inductance, L _e	0,7 mH

MOUNTING INFORMATION

Overall diameter Bolt circle diameter	312 mm 294,5 mm	12,28 in 11,59 in
Baffle cutout diameter:		
- Front mount	278 mm	10,94 in
- Rear mount	275 mm	10,83 in
Depth	140 mm	5,51 in
Net weight	5,86 kg	12,92 lb

Notes

* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.

** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

*** The X_{max} is calculated as (L_{vc} - H_{ag})/2 + (H_{ag}/3,5), where L_{vc} is the voice coil length and H_{ag} is the air gap height.

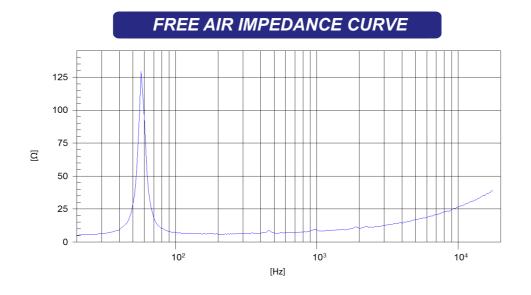


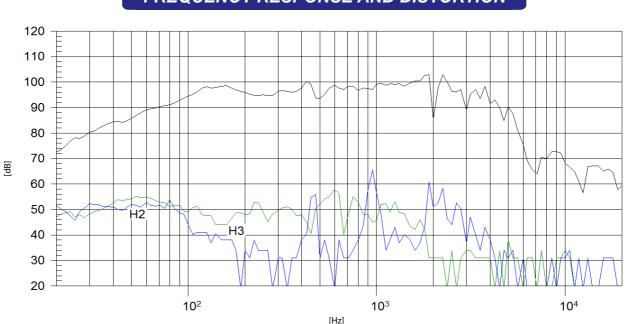


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Note: On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 2,83V @ 1m $\,$

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FREQUENCY RESPONSE AND DISTORTION